

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of)	
)	
INQUIRY REGARDING CARRIER)	ET Docket No. 03-104
CURRENT SYSTEMS, INCLUDING)	
BROADBAND OVER POWER LINE)	
SYSTEMS)	

To: The Commission

**REPLY COMMENTS REGARDING THE COMMENTS OF ARRL, THE
NATIONAL ASSOCIATION FOR AMATEUR RADIO BY CHRISTOPHER D.
IMLAY ITS GENERAL COUNSEL ON JULY 7, 2003**

I have read the ARRL comments relating to interference of amateur radio communication by Broadband over Power Line Systems (BPL). Having been an active amateur radio operator (W7KHC and W7PO) since the time that I was in high school in 1946, I am deeply concerned about the interference problem. I have analyzed the ARRL comments and supporting calculations and find them to be valid. Now as a retired electrical engineering Professor, specializing in electromagnetics I see the same flaws in Sec/ 15.31(f)(1) and (2) as pointed out in the ARRL comments. These subsections state that it is best to make measurements at the distances specified in the regulations, but the rules do permit measurements to be made at other distances if it is not practicable to measure at the required distance. Below 30 MHz, if measurements are made at other distances, the test engineer is permitted to either measure the fields at two points to determine the correct extrapolation factor or to use 40 dB/distance decade to estimate the field at the specified distance.

Physically large radiators such as a power lines cannot be treated as point sources where the 40 dB/distance decade for field-strength would be valid. Most high frequency (HF) receivers and transceivers would be close enough to the BPL radiators as to be in the near field where the field strength would attenuate

significantly less than 40 dB/distance decade. Thus extrapolation of the field strength from two measurement points to determine the field strength at greater distances based on the 40 dB/distance decade rule will greatly underestimate the potential for interference. As demonstrated by the ARRL through careful measurements and calculations, the FCC should formulate more valid methods for determining compliance of BPL services to interference prevention guidelines before permitting access of in-building BPL at HF or VHF.

Respectfully submitted,

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